

Amendments to the Claims

1. (Original) A computer-implemented method of performing
2 generational garbage collection on a memory using a dynamic slidable window, the
method comprising:
4 identifying a position in said memory at which a set of data expected to become
garbage within a finite period of time is to be stored;
6 fixing a lower bound of a slidable window at said position, wherein said window
is configured to identify a young generation within the memory;
8 allowing an upper bound of said window to dynamically expand while said lower
bound is fixed; and
10 after the set of data becomes garbage:
un-fixing said lower bound; and
12 decreasing a size of said window.

2. (Original) The method of claim 1, further comprising, prior to said
2 identifying:
receiving an alert from an entity configured to have knowledge of a nature of the
4 set of data.

3. (Original) The method of claim 1, further comprising, prior to said
2 identifying:
receiving notification that the set of data is to be stored in said memory.

4. (Original) The method of claim 3, wherein said identifying comprises:
2 identifying a location of an allocation point in said memory at the time said
notification is received.

5. (Original) The method of claim 1, wherein the size of said window
2 grows as said upper bound dynamically expands.

2 6. (Original) The method of claim 1, further comprising, after the set of
data becomes garbage:
garbage-collecting the young generation.

2 7. (Original) The method of claim 1, further comprising, prior to said
fixing:
garbage-collecting the young generation.

2 8. (Original) The method of claim 1, wherein said decreasing comprises:
setting the size of the window to a predetermined size.

2 9. (Original) The method of claim 1, wherein:
during allocation of said memory prior to said fixing:
said lower bound and said upper bound are configured to slide
4 simultaneously; and
the window maintains an unchanging size; and
6 during allocation of said memory after said fixing:
said lower bound does not slide;
8 said upper bound expands; and
the window dynamically changes size.

2 10. (Original) A computer readable storage medium storing instructions
that, when executed by a computer, cause the computer to perform a method of
performing generational garbage collection on a memory using a dynamic slidable
4 window, the method comprising:
identifying a position in said memory at which a set of data expected to become
6 garbage within a finite period of time is to be stored;
fixing a lower bound of a slidable window at said position, wherein said window
8 is configured to identify a young generation within the memory;
allowing an upper bound of said window to dynamically expand while said lower
10 bound is fixed; and

after the set of data becomes garbage:

- 12 un-fixing said lower bound; and
decreasing a size of said window.

11. (Currently Amended) A method of generational garbage collection
2 using a dynamic window, the method comprising:
 in a generational garbage-collected memory, defining a young generation with a
4 slidable window having a lower bound and an upper bound;
 receiving a first notification regarding storage, in the memory, of data expected to
6 become garbage in a relatively short period of time;
 fixing said lower bound in a position; and
8 allowing said upper bound to expand while said lower bound is fixed in said
position.

12. (Original) The method of claim 11, further comprising, after said
2 allowing:
 garbage-collecting the young generation; and
4 un-fixing said lower bound.

13. (Cancelled)

14. (Currently Amended) The method of claim 11 ~~13~~, further
2 comprising, after said allowing:
 receiving a second notification that said data have become garbage.

15. (Currently Amended) The method of claim 11 ~~13~~, further
2 comprising, after said allowing:
 observing the passage of a predetermined period of time.

16. (Original) The method of claim 11, wherein said allowing comprises:
2 incrementing said upper bound while said lower bound is fixed in said position.

17. (Currently Amended) The method of claim 11, wherein said fixing
2 comprises:
identifying a position in the memory at which said ~~temporary~~ data are to be
4 stored; and
setting said lower bound at the identified position.

18. (Currently Amended) The method of claim 11, wherein said fixing
2 comprises:
identifying a position in the memory where said ~~temporary~~ data are stored; and
4 setting said lower bound at the identified position.

19. (Currently Amended) The method of claim 11, wherein said fixing
2 comprises:
determining that said ~~a set of data that will become garbage in a relatively short~~
4 ~~period of time~~ will be stored in the memory;
wherein said position is the position at which said ~~the set of~~ data are or will be
6 stored.

20. (Currently Amended) A computer readable storage medium
2 storing instructions that, when executed by a computer, cause the computer to perform a
method of generational garbage collection using a dynamic window, the method
4 comprising:
in a generational garbage-collected memory, defining a young generation with a
6 slidable window having a lower bound and an upper bound;
receiving a first notification regarding storage, in the memory, of data expected to
8 become garbage in a relatively short period of time;
fixing said lower bound in a position; and
10 allowing said upper bound to expand while said lower bound is fixed in said
position.

21. (Currently Amended) A computer readable storage medium
2 containing a multi-generational data structure configured to be garbage-collected, the
data structure comprising:
4 a young generation comprising data recently stored in the data structure, wherein
said young generation is defined by a slidable window having:
6 a lower bound; and
an upper bound; and
8 an old generation comprising data that have survived one or more garbage
collections of said young generation;
10 wherein during a normal phase of allocation of the data structure:
said lower bound and said upper bound slide simultaneously; and
12 said window maintains an unchanging size; and
wherein during a temporary phase of allocation of the data structure:
14 said lower bound is fixed in a set position;
said upper bound is dynamically expandable; and
16 said window changes size as said upper bound dynamically expands.

22. (Currently Amended) An apparatus for performing generational
2 garbage collection, comprising:
a memory having an old generation and a young generation;
4 a slidable window for defining said young generation, said slidable window
comprising:
6 a lower bound configured to be fixed in a selectable position during a
temporary phase of allocation of the memory but slidable during a normal phase
8 of allocation of the memory; and
an upper bound configured to slide during said temporary phase and said
10 normal phase after said lower bound is fixed;
a garbage collector configured to perform garbage collection on one or more of
12 said old generation and said young generation; and
a memory allocator configured to:
14 allocate the memory in said ~~[[a]]~~ normal phase ~~manner~~ when said lower

bound and said upper bound slide simultaneously, thereby continuously defining a
16 different portion of the memory as said young generation during said normal
phase; and
18 allocate the memory in said [[a]] temporary phase manner when said
lower bound is fixed, thereby continuously increasing the size of the young
20 generation defined by said slidable window during said temporary phase.

23. (Currently Amended) The apparatus of claim 22, wherein:
2 said slidable window maintains an unchanging size while said memory allocator
allocates memory in said normal phase manner; and
4 said slidable window expands in size while said memory allocator allocates
memory in said temporary phase manner.

24. (Currently Amended) The apparatus of claim 22, wherein said
2 apparatus is configured to fix said lower bound and allocate memory in said temporary
phase manner when a set of data stored in said memory is expected to become garbage
4 within a finite period of time.

25. (Currently Amended) The apparatus of claim 24, wherein said
2 apparatus is configured to un-fix said lower bound and allocate memory in said normal
phase manner after said set of data becomes garbage.

26. (Original) The apparatus of claim 24, wherein said selectable position
2 is a position at which the set of data is stored.

27. (Original) The apparatus of claim 24, wherein said selectable position
2 is a position at which the set of data will be stored.

28. (Original) An electronic device, comprising:
2 a processor;
a garbage-collectable memory having:

4 an old generation of memory; and
 a young generation of memory defined by a slidable window having a
6 lower bound and an upper bound;
 a garbage collector for controlling garbage-collection of said memory;
8 executable code configured to:
 alert said garbage collector a first time when data to be stored in said
10 memory are expected to become garbage in a relatively short period of time; and
 alert said garbage collector a second time when said data have become
12 garbage;
 wherein, in response to said first alert, said lower bound is fixed in a position and
14 said upper bound is allowed to expand; and
 wherein, in response to said second alert, said lower bound is un-fixed.

29. (Original) The electronic device of claim 28, wherein, in response to
2 said second alert, said upper bound is retracted to return said slidable window to its size
prior to said first alert.

30. (Original) The electronic device of claim 28, wherein, in response to
2 said second alert, said garbage collector garbage-collects said young generation.

31. (Original) The electronic device of claim 28, wherein said electronic
2 device is a telephone.

32. (Original) The electronic device of claim 28, wherein said electronic
2 device is a computer.

33. (Original) The electronic device of claim 28, wherein said executable
2 code comprises a Java Virtual Machine.

34. (Original) The electronic device of claim 28, wherein said executable code comprises a compiler.